RAE COPPER PROJECT

Waste Management Plan

v. 1.0

September 2024

Prepared by RainCoast Environmental Services Ltd.

RAE COPPER PROJECT
WASTE MANAGEMENT PLAN

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1. Introduction

White Cliff Minerals Ltd. (WCM) is a publicly traded Australian-based (WCN on the Australian Stock Exchange) and Canadian-registered mineral exploration company that owns a 100% interest in Rae Copper Exploration Project (the Project). The Project consists of mineral claims in the West Kitikmeot Region of Nunavut on a combination of Inuit Owned Lands and Crown Lands (Figure 1). The Project area is about 60 kilometres from the community of Kugluktuk in an area with a long history of mineral exploration. WCM is applying for authorizations to allow a drill-based exploration program and associated exploration camp within the boundaries of WCM's mineral claims and has developed this plan as a part of these applications.

The purpose of this Waste Management Plan (Plan) is to outline methods for reducing, reusing, recycling, storing and disposing of wastes generated by the Project in a manner that is protective of the safety of communities, personnel, and contractors; limits impacts to the environment; aligns with industry best practice; and is compliant with all relevant Acts, Regulations, and authorizations. This plan will be implemented upon approval.

2. Project Description

The Rae Copper Project is proposed to be a seasonal drilling-based exploration program based out of a temporary tent-based exploration camp (Figure 1).

The Project will be accessed by plane using the existing all-weather Hope Lake Airstrip or a winter ice strip and/or by helicopter. Supplies may also be brought in by winter trail from Kugluktuk using low pressure vehicles (e.g. those on tracks or skids such as snowmobiles, snow cats, and sloops) as is done for other projects in the region. Within the Project area, access would primarily be by helicopter and foot, although winter trails or roads may be used when ground and snow/ice conditions permit. No all-weather roads are proposed.

The exploration camp will be comprised of temporary tent structures used for accommodations, food preparation, dining, office space, core cutting, and ablutions. Smaller structures will also be erected to house toilets (i.e., pit [outhouse], pacto, or incinerating toilets), pump house, and generators. Portable fly camps may also be seasonally used to support activities at remote locations. A full description of proposed structures and equipment is provided in WCM's application.

The camp will typically house around 25 people during seasonal drilling activities but could host up to 45 people when at peak activity. Camp water needs, including kitchen, showers, sinks, and core cutting, will be sourced from a nearby lake. Project wastes would include general camp wastes, greywater, toilet blackwater, core cutting and drill wastes, and ash from incineration and open burning. No landfill is proposed. A dual chambered forced air incinerator may be used to incinerate suitable wastes. Untreated wood, cardboard, and paper may also be open burnt but open burning will be minimized to the extent practical. Except for incinerated/open burnt wastes and wastes deposited in sumps, all wastes will be backhauled to an approved waste management facility outside of Nunavut.

Exploration will primarily be undertaken using diamond drills, although similarly sized reverse circulation (RC) drills may be utilized. The RC drill, like a Hornet, does not require water. Other activities typically

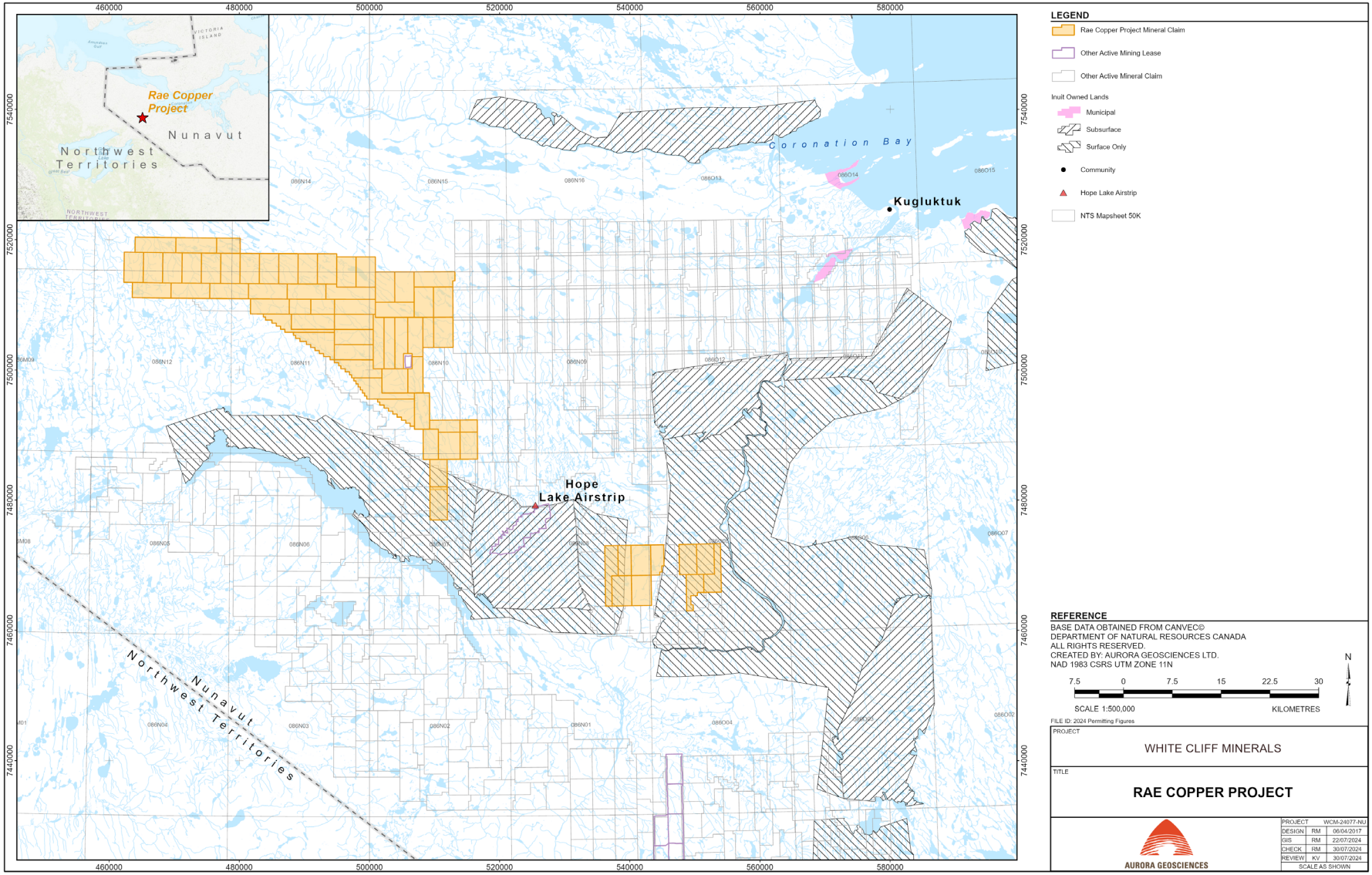

Figure 1. Rae Copper Project Location

associated with exploration may also be undertaken, such as aerial or ground-based surveys and sampling, staking, environmental monitoring and baseline studies, and archaeological assessment. Drill support and movement will be by helicopter or overland by winter trail or road. Drill water will be sourced from waterbodies proximal to drill targets and drill waste will be discharged to sumps, typically nearby natural depressions.

All sumps and fuel storage will be located at least 31 m from the Ordinary High Water Mark (OHWM) and a Spill Contingency Plan will be implemented.

Exploration activities will be undertaken seasonally, typically in summer and late winter but this may vary by activity. Each year, all activities will be seasonally shut down during the calving (May 28 to July 3) and post calving (June 21 to July 3) periods of the Blue Nose East Caribou herd. Outside of these periods, exploration activities would usually extend from a few weeks to a few months in duration each season.

3. Scope of Waste Management Plan

This Plan is intended to apply to all Project activities and outlines protocols to be followed to ensure wastes are handled, stored and disposed of in a manner that minimizes environmental or social impacts as well as final reclamation costs.

This Plan applies to all waste generated throughout the Project. This Plan is intended to comply with all applicable environmental Acts, Regulations, authorizations issued to the Project, and applicable guidance, including:

- *Canadian Environmental Protection Act* (1999)
- *Fisheries Act* (1985)
- *Hazardous Products Act* (1985)
- *Transportation of Dangerous Goods Act* (1992) and *Regulations* (2001)
- *Environmental Protection Act* (1988)*Territorial Lands Act (1985)*
- *Nunavut Waters and Nunavut Surface Rights Tribunal Act (2002)*
- *Cross-border Movement of Hazardous Waste and Hazardous Recyclable Material Regulations (2021)*
- *Environmental Emergency Regulations* (2019)
- *Nunavut Waters Regulations (2013)*
- *Territorial Land Use Regulations (2016)*
- Environmental Guideline: General Management of Special and Hazardous Waste in Nunavut (Government of Nunavut 2023)
- Environmental Guideline for the Burning and Incineration of Solid Waste (Government of Nunavut 2012)
- Technical Document for Batch Waste Incineration (EC 2010)

4. Waste Type Identification and Management

Waste characterization is used in assessing the appropriate handling, treatment, transportation, and disposal of the waste. Characterization is the assessment of the physical, chemical, and toxicological properties of the waste product. These properties are used to determine the dangers relating to handling, storage, and transportation of the waste on public roads, and to determine the environmental consequences of the waste so that an appropriate disposal option can be determined. This also allows the determination of special, hazardous or non-hazardous waste as well as dangerous drilling waste classification.

All waste that may be generated over the life of the Project can be classified into three basic categories from which best management practices can be applied:

- Hazardous or Potentially Hazardous Waste (includes Special Wastes; Government of Nunavut 2023)
- Non-Mineral Waste
- Mineral Waste

Potentially hazardous waste includes incinerator/ash residue; batteries; used oil, fuels, lubricants, greases, oil filters, solvents, and sorbent materials; chemical wastes (liquid or solid); hydrocarbon-contaminated soils; and hydrocarbon-contaminated water. Various small quantities of these waste streams will be generated through routine drilling and exploration activities, spill response, and precipitation accumulation in secondary containment. Hazardous and Potentially Hazardous Waste generated through Project activities will be backhauled to an approved waste management facility outside of Nunavut.

Non-mineral waste may be combustible or non-combustible and includes domestic refuse (e.g., paper, packaging materials, containers), putrescible waste and organic waste (e.g., food wastes), construction materials (wood, metal, plastic), and sewage. Limited quantities of these waste streams will be generated through routine drilling and exploration activities.

Mineral waste includes drilling waste from drill and core cutting activities, which is a mixture of rock cuttings (pulverized rock) and drilling fluids. Various quantities of these materials will be generated through routine drilling and exploration activities.

A detailed overview of the three waste streams, including a description of the characteristics of each stream, the estimated quantities to be produced in association with the Project, and the potential environmental effects associated with each stream, is provided in Table 1 along with an overview of how each waste stream and type will be managed and how potential environmental effects associated with waste types will be mitigated.

Table 1: Waste Types, Quantities, Management Approach, Potential Environmental Effects, and Mitigation Measures

Waste Stream and Type		Estimated Quantity[a]	Management Approach					Impact Assessment	
			Reduce	Reuse	Recycle/Recover	Treat	Dispose	Potential Environmental Effects	Mitigation Measures
Hazardous or Potentially Hazardous Waste	incinerator/ash residue batteries used oil, fuels, lubricants, greases, oil filters solvents, and spent sorbent materials chemical wastes (liquid or solid) hydrocarbon-contaminated soils	minimal, estimated <0.01 m^3/day				rake incinerator ash and remove non-burnable items	segregate at source to support efficient off-site management backhaul to main camp store in sealed containers in secure storage area at camp backhaul to an approved waste management facility outside of Nunavut via fixed-wing aircraft. Hydrocarbon contaminated soils may require testing prior to disposal	impairment of air quality and release of greenhouse gases (GHG) due to vehicle emissions associated with backhauling materials impairment of water quality or vegetation, degradation of fish habitat soil contamination wildlife attraction	consolidate waste and coordinate backhaul to reduce traffic provide adequate containment and cover to prevent precipitation ingress and leachate generation during storage and staging store waste potentially attractive to wildlife securely to limit wildlife access and leakage remove waste that may attract wildlife from remote worksites at the end of each shift

Waste Stream and Type		Estimated Quantity[a]	Management Approach					Impact Assessment	
			Reduce	Reuse	Recycle/Recover	Treat	Dispose	Potential Environmental Effects	Mitigation Measures
	hydrocarbon-contaminated water from secondary containment facilities	minimal, estimated <0.01 m^3/day	cover containment areas to reduce ingress of rain and snow			pass through activated carbon filter and deposit to tundra	pump out into sealed containers backhaul to camp store in sealed containers in secure storage area at camp backhaul to approved waste management facility outside of Nunavut via fixed-wing aircraft	impairment of air quality and release of GHG due to vehicle emissions associated with backhauling materials impairment of water quality or vegetation, degradation of fish habitat soil contamination land destabilization and erosion wildlife attraction	consolidate waste and coordinate backhaul to reduce traffics provide adequate containment and cover to prevent precipitation ingress and leachate generation during storage and staging routinely inspect secondary containment facilities store waste securely to limit wildlife access and leakage remove waste that may attract wildlife from remote worksites at the end of each shift

Waste Stream and Type		Estimated Quantity[a]	Management Approach					Impact Assessment	
			Reduce	Reuse	Recycle/Recover	Treat	Dispose	Potential Environmental Effects	Mitigation Measures
Non-Mineral Waste	combustible waste: domestic refuse (paper, cardboard, packaging materials) construction materials (wood) putrescible and organic waste (food waste)[b]	minimal, estimated <0.1 m^3/day		reuse and repurpose materials where safe and suitable	segregate at source to support efficient off-site management		backhaul to camp incinerate putrescible and organic waste, incinerate or burn other combustible waste (i.e., untreated wood, cardboard, and paper), or backhaul via fixed-wing aircraft for disposal in an approved landfill outside of Nunavut	impairment of air quality and release of GHG due to vehicle emissions associated with backhauling materials wildlife attraction/access of food waste	sort waste to identify reusable or recyclable materials consolidate waste and backhaul to reduce traffic store waste securely to limit wildlife access and leakage remove food waste and waste that may attract wildlife from remote worksites at the end of each shift incinerate food waste daily or double bag with industrial grade garbage bags and store in an enclosed structure lined with plastic and sealed with a removable lid to ensure it can be regularly cleaned and to reduce odors from escaping to prevent the attraction of wildlife

Waste Stream and Type		Estimated Quantity[a]	Management Approach					Impact Assessment	
			Reduce	Reuse	Recycle/Recover	Treat	Dispose	Potential Environmental Effects	Mitigation Measures
	non-combustible waste: domestic refuse (food containers, packaging materials) construction materials (metal, plastic)	minimal, estimated <0.1 m^3/day	purchase in bulk to reduce packaging, where available	reuse and repurpose containers and scrap where safe and suitable			segregate at source to support efficient off-site management backhaul to camp backhaul outside of Nunavut via fixed-wing aircraft and transport to a suitable landfill	impairment of air quality and release of GHG due to vehicle emissions associated with backhauling materials wildlife attraction	sort waste to identify reusable or recyclable materials consolidate waste and coordinate backhaul to reduce traffic store waste securely to limit wildlife access remove waste that may attract wildlife from remote worksites at the end of each shift double-bag food-contaminated waste with industrial grade garbage bags and store in an enclosed structure lined with plastic and sealed with a removable lid to ensure it can be regularly cleaned and to restrict odors from escaping to prevent the attraction of wildlife
	sewage: blackwater from pacto toilets blackwater from pit toilets blackwater from incinerating toilets (e.g. incinolets)	minimal, estimated <0.1 m^3/day				pit toilet blackwater will be left to compost in pits pits will be filled in on closure of the toilet location	place and store blackwater in sealed storage bins backhaul to camp incinerate in incinerators designed to handle human/animal waste or backhaul outside of Nunavut via fixed-wing aircraft and transport to a suitable landfill	wildlife attraction impairment of air quality and release of GHG due to vehicle emissions associated with backhauling materials	combust in incinolets seal pit toilets when left unoccupied remove pacto waste whenever remote sites are left unoccupied or more frequently consolidate waste and coordinate backhaul to reduce traffic store waste securely to limit wildlife access

Waste Stream and Type		Estimated Quantity[a]	Management Approach					Impact Assessment	
			Reduce	Reuse	Recycle/Recover	Treat	Dispose	Potential Environmental Effects	Mitigation Measures
	greywater	5 m^3/day average					collect greywater in a sump	wildlife attraction nutrient enrichment of local waterbodies	in kitchen, use strainer baskets to prevent food material from entering the greywater waste stream ensure sump is in an area with good infiltration (e.g., coarse-grained, gravelly sand) and located >31 m from the OHWM of the nearest waterbody, as approved by an Inspector verify freeboard is maintained, filling sump on closure
Mineral Waste	core cutting waste	<0.01 m^3/day		reuse core saw water where possible		use settling containers to support reuse where reasonable	discharge to sump	land destabilization, erosion, permafrost degradation	discharge wastewater to a sump located >31 m away from the OHWM of any watercourse verify sumps are of adequate size and stable minimize use of water by recirculating wastewater to the extent possible filling sump on closure

Waste Stream and Type		Estimated Quantity[a]	Management Approach					Impact Assessment	
			Reduce	Reuse	Recycle/Recover	Treat	Dispose	Potential Environmental Effects	Mitigation Measures
	drilling wastewater	variable; proportionate to volume of water used	recirculate drill water to reduce freshwater required	reuse drill water where possible		use settling tanks and/or flocculants to support reuse where possible	discharge to natural depression	impairment of water quality or vegetation, degradation of fish habitat and use of water soil contamination land destabilization, erosion, permafrost degradation	discharge wastewater to a natural depression or sump located >31 m away from the OHWM of any watercourse verify sumps are of adequate size and stable minimize drill waste by recirculation and removal of solids maintain a closed circuit of drilling fluids when drilling on ice or near water use non-toxic drilling additives and minimize use of salt to the greatest extent possible minimize use of water by recirculating freshwater with use of a reservoir and reusing drilling fluids to the extent possible

[a]Average anticipated daily quantities for days when exploration activities are being undertaken, which is only anticipated to be a portion of the year.
[b]Food waste and other putrescible waste including sewage may be disposed of in dual chamber, diesel incinerators or backhauled off site.

5. Waste Management Infrastructure

Waste management infrastructure includes an incinerator and/or burn barrel, incinerating pacto or pit toilets, camp greywater sump, core cuttings sump, waste consolidation area (for waste awaiting backhaul), and secure containment for any wastes attractive to wildlife.

The incinerator will be selected for the types of wastes that are intended to be incinerated. Any incinerator and/or burn barrel will be located downwind from the camp and placed on gravelly or rocky ground with no vegetation or combustible material in the vicinity. Burning will be monitored at all times and will only be used to burn acceptable combustible materials (untreated wood, paper, and cardboard). Incineration practices will follow manufacturer recommendations. Ash from incineration and burning will be collected and backhauled outside of Nunavut for disposal.

Camp greywater and core cuttings sumps will be located near the camp or core shack, respectively, but at least 31 m away from the OHWM of any waterbody. Kitchen water will be screened to remove food particles prior to discharge to reduce the likelihood of attracting wildlife. The sump is intended to allow slow infiltration of water into the soil and land filtration and remediation. The greywater sump will be inspected daily to remove any food waste and may be treated as needed with lime or crystal lye to prevent being an attractant to wildlife. On completion of exploration activities, any dug sumps will be backfilled. Drilling waste is anticipated to be discharged to natural depression where no backfilling is needed and as close to the drill as possible.

All waste being backhauled for disposal at an approved landfill will be consolidated by waste type and stored in a manner to reduce environmental risk. Wastes will be removed promptly on the first available backhaul with a preference for prioritizing the backhaul of any hazardous wastes when possible.